

The self and peripersonal space: a novel two-phase audio-tactile paradigm and its implication for defensive boundaries

Thursday, September 11, 2025 12:00 PM (20 minutes)

Peripersonal space (PPS) refers to the space immediately surrounding the body and plays a crucial role in motor interaction and defensive behavior. Furthermore, PPS has been linked to the bodily self and shown to be highly plastic: its boundaries can be modulated physically (e.g., spinal cord injury, amputation, tool use), perceptually (e.g., mindfulness, interoception, sensory deprivation) but also cognitively (e.g., following positive or negative social interactions). We propose a novel paradigm to investigate whether PPS can also be modulated by purely cognitive manipulations related to self vs. non-self-representations. Participants will complete a two-phase procedure. In the Association Phase, they will perform a sound-label matching task, associating two neutral auditory stimuli with self ("YOU") or non-self ("STRANGER") labels, creating implicit links. In the PPS Measurement Phase, participants will perform an audio-tactile integration task where previously associated sounds (self vs. non-self) accompany tactile stimuli delivered at varying distances. Reaction times to tactile stimuli as a function of auditory proximity will be used to infer PPS size and strength. If PPS solely reflects bodily self-modulations, no difference is expected between conditions. If cognitive self-associations influence PPS, non-self-associated stimuli should elicit a wider and more rigid PPS compared to self-associated stimuli. This paradigm may provide evidence on how abstract self-representations can reshape multisensory defensive boundaries. Understanding these dynamics is particularly relevant for aging populations, who often show an increased perception of environmental stimuli as threatening. Potential applications in mindfulness or compassion-based interventions will be discussed.

If you're submitting a symposium talk, what's the symposium title?

Mind, Body, and Beyond: Integrated Approaches in Cognitive Decline

If you're submitting a symposium, or a talk that is part of a symposium, is this a junior symposium?

No

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